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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,281	01/16/2001	Michael Yip	2717P017	5580

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EXAMINER

QURESHI, AFSAR M

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,281

Applicant(s)

YIP ET AL.

Examiner

Afsar M. Qureshi

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. Responsive to amendment, received on December 13, 2004, claims 1-12 are cancelled, new claims 13-26 are added as requested.

Drawings

2. Figure 1 should be designated by a legend such as --**Prior Art**-- because only that which is old is illustrated See MPEP § 608.02(g). The Applicant used this conventional diagram to show cluster of servers as a prior art.

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 21-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21-26 are written in run-on (fused) sentence form that makes it difficult for the Examiner to understand said claims clearly. Applicant is requested to re-write these claims in clear and concise manner for further examination. Applicant is also requested to show support for these claims in the Specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 13 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hariguchi et al. ('Hariguchi'), US Patent No. 6,665,297.

Art Unit: 2667

Claims 13 and 20. Hariguchi discloses method for forwarding data packets to one of a plurality of servers. Method comprises receiving Datagram packets via input ports at a router 26 (figure 2 A, col. 4, lines 31-35),

a hash circuit 82 using the embedded IP destination address Dest_ip_addr within the Datagram as a seed for performing hashing (fig.4, col. 6, lines 40-45),

a hash value generator circuit 156 generates a hash value (fig. 4, col. 6, lines 62-65),

Hariguchi further discloses using the hashed value as address pointing into hash bucket 160 for looking up a table of network address, output pointer, and H/M information (fig. 4, col. 6, lines 66 through col. 6, line 2),

Using pre-pending address logic 46, packet switch 46, packet switch 48, and output ports (50-n) to forward the datagram to next hop or server (fig. 2A, col. 5, lines 46-49).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14-19 and 21-26 are rejected under 35 U.S.C. 103(a) as being obvious over Hariguchi and Oki et al. ('Oki'), US 6,735,206.

Regarding claims 14-17. Hariguchi discloses using Des_ip_addr from the datagram to generate the hash value (performing the hash function using the IP source address), col. 6, lines 40-51.

Hariguchi does not specifically disclose performing hash function using TCP source and destination port numbers, as in claims 16 and 17.

However, Oki, in the same field of endeavor, discloses that uses a source address, a destination address that include IP address, an associated port number and a protocol identifier, such as TCP or UDP (see col. 3, lines 32-36, also, col. 9, lines 7-28).

Regarding claims 18 and 19. Further to Hariguchi, Oki also discloses searching the server bank table of an address from plurality of servers by searching for an IP address and MAC address of one of the plurality of servers (see col. 9, lines 30-52 and line 67 through col. 10 to line 6, also, see figures 4, 7 and 8).

Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to be able to utilize the load balancing techniques as taught by Oki and improve the performance of router (of Hariguchi) search for any specified destination address in a fixed, scalable, deterministic amount of time therefore reducing the implementation cost. An artisan would have been motivated to modify invention by Hariguchi, in light of teachings by Oki, to develop 'a packet forwarding process' for scalable service such as disclosed in the instant invention.

Regarding claims 21-26. All the limitations are already discussed in the rejection of claims 15-19 above.

Art Unit: 2667

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Modi et al. (US 6,667,980);

Mankude et al. (US 6,735,205).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M. Qureshi whose telephone number is (571) 272 3178.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272 3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


AFSAR QURESHI
PRIMARY EXAMINER

May 18, 2005